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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

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ART UNIT

PAPER NUMBER

2163
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.
09/721,141

Applicant(s)
Neelmadhaba

Examiner
M. Irshadullah

Art Unit
2163

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Nov 22, 2000
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-35 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892) 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 19) ☐ Notice of Informal Patent Application (PTO-152)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 20) ☐ Other: _____

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DETAILED ACTION

1. This communication is in response to amendments filed November 22, 2000.
2. Priority as a divisional of application 08/786,489, filed January 21, 1997 has been entered.
3. Amendments to Claim 29 have been entered as per April 05, 2000 request.
4. Claims 1-25 and 36-39 have been canceled.

Specification

5. The disclosure is objected to because of the following informalities:
 - a) Page 19: Box, assignment limits, last line should read: " and no days less than Y days per week) ".
 - b) Page 20, line 23: " the Group 4 assignments. ", should read "the Group 3 assignments.". Similarly, line 24: "the Group 3", should be "the Group 4 ".

Appropriate corrections as mentioned above and others are appreciably required for the benefit of the Patent Community.

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Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

7. Claims 26, 29, 30-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Hughes et al (US Patent 5,893,074).

Hughes et al disclose:

Claim 26. A method for generating a plurality of individually schedulable assignments for a task, based upon task constraints associated with said task, said task constraints identifying N resources assigned to said task where N is a positive integer, and a required work-amount corresponding to each of said N resources [Title, Abstract, lines 1-2, col 3, lines 29, 40-43], comprising the steps of:

a) dividing said task into N assignments, each of said N assignments being associated with one of said N resources [Abstract, lines 6-8, col 2, lines 10-11, col 4, lines 30-31, Fig. 1 (10, 14a-d, 15a-d), col 5, lines 9-11, col 6, lines 19, 20, 21 and 22 read with col 3, lines 29, 40-43]; and

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b) equating a work-amount for each of said N assignments to the required work-amount corresponding to said resource associated with said assignment [Col 6, lines 19, 20, 21, 22, Fig. 1 (10, 14a-d, 15a-d)].

Claim 29. (Amended) A computer-readable medium on which is stored a computer program for generating a plurality of schedulable assignments for a task [Fig. 5 described col 11, lines 9-32 (specifically lines 17-19), Title, Abstract, lines 1-2, col 3, lines 29, 40-43], [comprising] said program performing the steps comprising [of]:

a) receiving a task description for said task, said task description identifying N resources assigned to said task where N is a positive integer, a required work-amount corresponding to each of said N resources, and one or more scheduling constraints for said task [Col 2, lines 17-19, col 5, lines 30-32 recited with col 5, lines 10-13, 46-50, col 11, lines 44-47]:

b) dividing said task into N assignments, each of said N assignments identifying one of said N resources [Abstract, lines 6-8, col 2, lines 10-11, col 4, lines 30-31, Fig. 1 (10, 14a-d, 15a-d), col 5, lines 9-11, col 6, lines 19, 20, 21 and 22 read with col 3, lines 29, 40-43];

c) equating a work-amount for each of said N assignments to the required work amount corresponding to said resource identified by said assignment [Col 6, lines 19, 20, 21, 22, Fig. 1 (10, 14a-d, 15a-d)]; and

d) associating each of said N assignments with said scheduling constraints for said task [Col 6, lines 19, 20, 21 and 22, col 11, lines 44-47].

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Claim 30. A computer system for generating assignments for a task, comprising:

- a) a processing unit [Fig 1 (20)];
- b) a memory storage device [Fig. 1 (18)];
- c) a program module, stored in the memory storage device for providing instructions to the processing unit [Fig. 1, col 5, lines 16-26 (specifically lines 24-26)];
- d) the processing unit, responsive to the instructions of the program module [Fig. 1 (20), col 5, lines 4-6, 16-32], operative to:
 - e) receive a task description for the task, the task description identifying N resources assigned to the task where N is a positive integer, and a total amount of required work for the task [Col 2, lines 17-19, col 5, lines 30-32 recited with col 5, lines 10-13, 46-50, col 11, lines 44-47]; and
 - f) divide the task into N assignments, each of the N assignments identifying one of the N resources [Abstract, lines 6-8, col 2, lines 10-11, col 4, lines 30-31, Fig. 1 (10, 14a-d, 15a-d), col 5, lines 9-11, col 6, lines 19, 20, 21 and 22 read with col 3, lines 29, 40-43].

Claim 31. The computer system of Claim 30, wherein the processing unit is further operative to set a work-amount for each of the N assignments to the total amount of required work divided by N [Inherently/notorious implied/known, since breaking a project/task into an equal number of components/tasks/assignments one has to divide by a number, say N].

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Claim 32. The computer system of Claim 30, wherein the task description includes an assignment limit for at least one of the N resources, and the processing unit is further operative to set a work amount for each of the N assignments in accordance with the assignment limits and in a manner that the summation of all of the work-amounts is equal to the total amount of required work [Col 2, lines 5-25, claim 8, read with col 13, lines 1-11 (specifically lines 1-4, 5-8)].

Claim 33. The computer system of Claim 30, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative set a work-amount for each of the N assignments as a function of the scheduling constraints and in a manner that the summation of all of the work-amounts is equal to the total amount of required work [Col 11, lines 40-44 (specifically lines 43-44), lines 44-47, claim 8 recited with col 13, lines 1-11 (specifically lines 1-4, 5- 8)].

Claim 34. The computer system of Claim 30, wherein the task description includes one or more scheduling constraints for the task, and the processing unit is further operative to associate each of the N assignments with the scheduling constraints [Col 11, lines 40-44 (specifically lines 43-44), lines 44-47, col 6, lines 19, 20, 21 and 22 read with col 5, lines 9-13 and 46-50].

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Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 27, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hughes et al (US Patent 5,893,074) in view of Deziel, Jr. et al (US Patent 5,406,476).

In the following claim Hughes et al do not explicitly show the recited features:

Claim 27. The method of Claim 26, wherein said task constraints identify one or more scheduling constraints and further comprising the step of associating each of said N assignments with said scheduling constraints.

However, Deziel et al teach the same [Title, Abstract, lines 3-7, col 1, lines 12-15, Figs. 3a and 3c described col 9, lines 46-68 continue col 10, lines 1-28 and 29-43].

It would have been obvious to one of ordinary skill in the project/task/assignment scheduling to incorporate Deziel et al's features into Hughes et al's invention, because it would provide an efficient method for scheduling resources amongst the various activities in light of the attendant resource and activity constraints.

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Claim 28. The method of Claim 26, wherein said task constraints identify one or more scheduling constraints and further comprising the step of associating each of said N assignments with said task being divided [Deziel et al: Title, Abstract, lines 3-7, col 1, lines 12-15, Figs. 3a and 3c described col 9, lines 46-68 continue col 10, lines 1-28 and 29-43 and Hughes et al: Fig. 1 (10, 15a-d, 14a-d)].

Claim 35. The computer system of Claim 30, wherein the task description includes one or more scheduling constraints for the task [Hughes et al: Col 11, lines 40-44 (specifically lines 43-44), lines 44-47], and the processing unit [Fig. 1 (20)] is further operative to:

associate each of the N assignments with the scheduling constraints [Hughes et al: Col 6, lines 19, 20, 21 and 22 and col 11, lines 44-47]; and

assign a priority to each of the assignments as a function of the scheduling constraints [Deziel et al: Abstract, line 6, col 8, lines 39-44].

Conclusion

10. Additional prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A) Shinagawa et al., US Patent 5,897,629. Apparatus For Solving Optimization Problems And Delivery Planning System.

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B) Harris et al., US Patent 5,878,416. Automated System And Method For Matching An Item Of Business Property To A Recipient.

C) Chin et al., US Patent 5,787,283. Framework For Manufacture Logistics Decision Support.


D) Dietrich et al., US Patent 5,630,070. Optimization Of Manufacturing Resource Planning.

E) Zhu et al., US Patent 5,884,276. System For Translating An Optimization Problem For Use In Efficient Resource Allocation.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Irshadullah whose telephone number is (703) 308-6683. The examiner can normally be reached on M-F from 10:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached on (703) 305-9643. The fax numbers for the organization are (703) 305-0040/308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3900.


M. Irshadullah

June 15, 2001


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